

Appl. No. 10/605,094  
Amdt. dated July 31, 2006  
Reply to Office action of May 30, 2006

**Amendments to the Claims:**

1. (currently amended) A compensator circuit for compensating an error signal generated by an optical storage device, the compensator circuit comprising:
- 5 a phase-lead compensator for receiving the error signal and generating a phase-lead error signal;
- a band-pass filter connected in parallel with the phase-lead compensator for providing phase-lag compensation and magnifying a rotating frequency error signal and generating to thereby generate a filtered and phase-lag compensated
- 10 signal; and
- an adder for adding the phase-lead error signal and the filtered and phase-lag compensated signal ~~so as~~ to lower a steady state error of the error signal;
- the compensator circuit not comprising any phase-lag compensator.
- 15 2. (original) The compensator circuit of claim 1, wherein the phase-lead compensator is a differentiator.
3. (original) The compensator circuit of claim 1 is installed inside an optical storage device.
- 20 4. (original) The compensator circuit of claim 3, wherein the optical storage device is a DVD-ROM drive.
5. (original) The compensator circuit of claim 3, wherein the optical storage device is a
- 25 CD-ROM drive.
6. (original) The compensator circuit of claim 3, wherein the optical storage device is a CD-RW drive.

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7. (original) The compensator circuit of claim 3, wherein the optical storage device is a DVD-RW drive.
- 5 8. (original) The compensator circuit of claim 3, wherein the optical storage device further comprises a pickuphead.
9. (currently amended) A method for compensating an error signal generated by an optical storage device, the method comprising:
- 10 generating a phase-lead error signal according to the error signal with a phase-lead compensator;
- generating a filtered and phase-lag compensated signal according to the error signal with a band-pass filter; and
- adding the phase-lead error signal and the filtered and phase-lag compensated signal with an adder to lower a steady state error of the error signal;
- 15 the method not comprising the step of generating a phase-lag error signal with a phase-lag compensator.
10. (original) The method of claim 9, wherein the phase-lead compensator is a differentiator.
- 20 11. (new) The compensator circuit of claim 1 wherein the band-pass filter provides phase-lag compensation by amplifying the rotating frequency error signal.
12. (new) The compensator circuit of claim 1 wherein the band-pass filter operates in a frequency range outside of an operational range of the phase-lead compensator.
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